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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,849	10/24/2005	Hiroshi Fukui	71,051-007	7869

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HOWARD & HOWARD ATTORNEYS PLLC  
450 West Fourth Street  
Royal Oak, MI 48067

EXAMINER
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LOEWE, ROBERT S

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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01/09/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/533,849

**Applicant(s)**

FUKUI, HIROSHI

**Examiner**

ROBERT LOEWE

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 6 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CD/CD)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's amendments, filed on 12/12/08, with respect to claims 1-4 and 6 effectively overcome the previously relied upon prior art rejections. Specifically, neither Kleyer et al. nor Enami et al. teach a silicone oil which satisfy the structural requirements of instant claim 1. The silicon oils taught by Kleyer et al. and Enami et al. only teach instances where n is an integer of 3. However, the newly amended claim requires that n be an integer of from 5 to 100, which is not taught or suggested by Kleyer et al. or Enami et al. However, a new ground of rejection is introduced below.

It should be noted that US application 2004/0254275 (the national stage entry of PCT/JP02/04642, which is equivalent to WIPO publication WO 2002/092693) was employed as a 102(e) reference in a previous Office action. This reference was appropriately shown by the Applicants to not qualify as a 102(e) reference. However, the WIPO publication (WO 2002/092693) qualifies as a 102(a) reference against the instant application. In an effort to obviate any potential 102(a) rejection using the WIPO publication, Applicants have perfected their foreign priority by providing a certified English-language translation of their foreign priority application, this overcoming any potential 102(a) rejection.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al. (US Pat. 5,872,170).

Claim 1: First, the fillers taught by Mine et al. are taught be electrically conductive fillers and not heat conductive fillers. However, all of the electrically conductive fillers taught by Mine et al. are also inherently heat conductive (i.e., metals are well-known heat conductors). As such, Mine et al. teaches the limitation of instant claim 1 of employing a heat conductive filler.

Second, while Mine et al. does not explicitly teach that the electrically conductive fillers are surface-treated with the silicone oils of instant claim 1, it is the position of the Examiner that such surface-treatment is inherent. Support for this assertion can be found in Applicants instant specification wherein it is taught that the compositions taught therein may be prepared simply by mixing the silicone oil and heat conductive filler. Mine et al. teaches that the adhesion-promoting agents may be mixed with the electrically conductive silicone compositions.

Mine et al. teaches a composition comprising an adhesion promoter which is a silicone oil and a thermally conductive filler, such as silver (16:38-43). Silver is well-known to be a heat conductive filler as well. Mine et al. teaches that the adhesion-promoting agents/silicone oils may satisfy the limitations for components (A<sub>1</sub>) and (A<sub>3</sub>) of instant claim 1 (17:40-55). Specifically, Mine et al. teaches polysiloxane oligomers/polymers having trimethoxysilane end-groups and either vinyl dimethylsiloxy or dimethylhydrogensiloxy groups. While Mine et al. does not explicitly teach that the number of repeat units may be from 5 to 100, the teaching by Mine et al. that repeat unit "m" is a positive number would suggest to a person having ordinary skill in the art polysiloxanes which satisfy the numerical requirement for integer "n" of instant claim 1.

Mine et al. further teaches that the amount of adhesion promoter/silicone oil is preferably from 0.1 to 5 parts by weight with respect to 100 parts by weight of component (A) of Mine et al. (the alkenylpolysiloxane) (18:23-27). The amount of electrically conductive filler is taught to be preferably from 300-1,000 parts by weight based on 100 parts by weight of component (A) of Mine et al. (10:25-30).

Therefore the ratio of electrically conductive filler to silicone oil is from 60-10,000, which has substantial overlap with instant claim 1. Arrival at this ratio can be shown as follows:

adhesion promoter/silicone oil is present from 0.1 to 5 parts based on 100 parts of (A)

electrically conductive filler is present from 300-1,000 parts based on 100 parts of (A)

Since there are 100 parts of (A) in both instances the four ratios of filler to silicone oil are:

$$300/0.1 = 3,000$$

$$300/5 = 60$$

$$1,000/0.1 = 10,000, \text{ and}$$

$$1,000/5 = 200.$$

Therefore, the total preferred ratio of filler to silicone oil is 60-10,000.

Claim 6: Mine et al. teaches in addition to components (A) and (B), a polysiloxane which is capable of reacting with the silicone oil (A) via hydrosilylation [component (B) of Mine et al.].

#### ***Allowable Subject Matter***

Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims. Specifically, while Mine et al. renders obvious the composition of instant claim 1, Mine et al. does not teach or suggest that alumina may be employed as a heat conductive filler as required by instant claims 2-4. Further, Mine et al. is concerned with **electrically** conductive fillers and alumina is a known insulator.

#### ***Relevant Art Cited***

The prior art made of record and not relied upon but is considered pertinent to applicants disclosure can be found on the attached PTO-892 form.

#### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT LOEWE whose telephone number is (571)270-3298. The examiner can normally be reached on Monday through Friday from 5:30 AM to 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-13021302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./  
Examiner, Art Unit 1796  
2-Jan-09

/Randy Gulakowski/  
Supervisory Patent Examiner, Art Unit 1796